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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

T. Hu 19

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on April 10, 2009

Signature

Typed or printed name John Ligon

Application Number

10/815,128

Filed

March 31, 2004

First Named Inventor

Hu

Art Unit

2416

Examiner

D. Chery

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐

applicant/inventor.

☐

assignee of record of the entire interest.

See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

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attorney or agent of record.

Registration number 35,938☐

attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 _____

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Telephone numberApril 10, 2009
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

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*Total of _____ forms are submitted.

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Form PTO/SB/33 Supporting Reasons
Application S/N 10/815,128

In the Final Office Action, independent claim 1, along with dependent claims 3-4, 10 and 11 were rejected under 35 U.S.C. §102(e) as being anticipated by Torsner *et al.* (U.S. Patent No. 7,187,677). Independent claim 12, along with dependent claim 15 were rejected under 35 U.S.C. §102(e) as being anticipated by Chao (U.S. Patent No. 6,693,910). Claims 5-9, which depend, either directly or indirectly, from independent claim 1 were rejected under 35 U.S.C. §103(a) as being unpatentable over Torsner in view of Watanabe *et al.* (U.S. Patent No. 6,285,662). The Applicant herewith requests review of such rejections, and submits that, upon such review, the rejection bases cannot be upheld.

The thrust of the invention here is a method for reducing the impact of stalling at a communications receiver due to the non-receipt, or delayed receipt of a packet expected by the receiver to be sent from a transmitting location. As taught by the Applicant, packet data is generally sent from a transmitter to a receiver in sequentially numbered packets. The receipt by the receiver of an out-of-sequence packet provides an indication that a prior-numbered packet has not been received. In the prior art, that determination at the receiver of receipt of an out-of-sequence packet triggers the start of a timer, and the continued non-receipt of the packet through a timeout of the timer duration is taken as an indication that the packet is lost, and the receiver moves on to other packet processing steps which are known in the art. The processing delay related to the wait at the receiver for either receipt of the non-received packet or timer timeout is known as a stall condition.

However, as the Applicants point out, there are various conditions that may occur at the transmitter site that are known to the transmitter as conditions that would result in a lost-packet event occurring at the receiver, but, unlike the transmitter site, which may have immediate or short-term indication of the occurrence of such a lost-packet event, the receiver must await timer timeout before confirming that determination, thus resulting in an unnecessary stall condition.

According to the method of the invention, a probability of a stalling condition occurring in respect to a given transmitted packet is determined at the transmitter site, as a function of known system parameters – generally, amount of data being transmitted, number of retransmission requests from the receiver and transmission error probability. From that probability, a wait time is determined in respect to an expected event or response. If the event or

response does not occur by the end of the wait time so determined, a signal is sent to the receiver, termed a “flush command,” that operates to terminate a stall condition occurring in respect to the apparently-missing packet. In many instances termination of the stall condition through operation of the probabilistically determined flush command will end the stall condition earlier than would have occurred through operation of the timer timeout at the receiver.

With respect to the rejection of independent claim 1 as being anticipated by Torsner, the Applicant notes that claim 1 includes a limitation directed to the determination of the stall probability parameter described above, and respectfully submits that Torsner cannot reasonably be construed to teach any such probability determination. The particular portion of Torsner cited by the Office Action as supporting its conclusion that Torsner teaches this limitation (col. 3, lines 43-45) is merely a statement of the goal of Torsner’s invention (“stall avoidance”) and a definition of what constitutes a stall condition for Torsner’s approach. Indeed, in the immediately following text, Torsner describes its approach for addressing a stall condition as exactly the timer timeout approach described above and well known in the prior art. Thus, at best, Torsner can be seen to only teach a binary determination that a stall condition exists or does not exist. Plainly such a binary determination does not constitute a probabilistic characterization of the likelihood of a stall occurring – inherently a range of values. The Office Action turns logic on its head here in its assertion that such an on-off resultant in Torsner could somehow be characterized as probabilistic. Even if one stretches the point to assert that a collection of such resultants might be characterized as a statistical distribution, nothing in such a resultant can reasonably be construed to infer a probabilistic determination of any individual resultant -- and plainly, as described above, nothing in the approach of Torsner could reasonably be described as a probabilistic determination of a stall condition.

The Applicant further submits there Torsner fails to teach the further limitation of independent claim 1 respecting the transmittal of a flush command to the receiver for the purpose of terminating the stall condition. The Office Action asserts that this limitation is taught by a portion of Torsner that teaches the termination of the stall condition upon the missing data not being received by the expiration of a timer operated at the receiver. Not only is such a receiver-based timer, as a basis for terminating a stall condition, part of the prior art already addressed by the Applicant in the background portion of his application, such a receiver-based timer operation

cannot possibly be construed as equivalent to a flush command transmitted to the receiver, necessarily from a source apart from the receiver.

The Applicant accordingly submits that claim 1 is clearly patentable over Torsner. The remaining claims rejected as being anticipated by Torsner all depend, either directly or indirectly from independent claim 1 and thus must also be patentable on the basis of that dependency. Nonetheless, the Applicant respectfully submits that the limitation of dependent claim 4 – estimating a wait time as a function of the determined stall probability – is plainly not taught by Torsner, and that claim is accordingly independently patentable over Torsner. The teaching of Torsner cited by the Office Action as teaching the limitation of claim 4 is solely directed to Torsner's use of a timer at the receiver to terminate a stall condition at timer expiration. Plainly, such a timer-based stall termination has no relationship to a wait time established as a function of a determined stall probability.

With respect to the rejection of independent claim 12 as being anticipated by Chao, the Applicant notes that claim 12 includes a limitation directed to the probability of a stalling condition being determined in relation to a state of at least one system parameter for the wireless system. The Applicant respectfully suggests that nothing in the teaching of Chao could reasonably be construed to show or suggest the use of a probability factor in respect to a stalling condition. Moreover, the particular portion of Chao cited by the Office Action as support for the rejection of claim 12 (col. 2, lines 60-63 and col 3, lines 1-30) plainly does not contemplate any such probability factor. The first part of the cited material simply contemplates the operation of a timer at the receiver, much in the manner of the previously cited material from Torsner (and as taught in Applicant's background section as being the standard prior-art approach), to terminate a stall condition at time-out of the timer. The second part of the cited material simply describes the various packet loss or delay scenarios that can lead to the occurrence of a stall condition, substantially the same set of scenarios described in Applicant's background section.

The Applicant therefore submits that claim 12 is patentable over Chao. Claim 15, which depends from claim 12 should also be patentable based on that dependency.